

RESEARCH NOTES

NOTES ON *TRACHYPENEUS (TRACHYSALAMBRIA) SIMILIS* (SMITH), IN THE TORTUGAS SHRIMP FISHERY *

According to Idyll (1957, Fla. St. Bd. Conserv., Ed. Ser. No. 6:1-30), the entire Tortugas shrimp fishery is supported by one penaeid species, the pink shrimp, *Penaeus duorarum* Burkenroad. However, there are indications that other penaeid species may be of importance to the commercial catches in this area.

During January 1958, a two pound box of frozen headless "medium" shrimp, produced from Tortugas and packed by a Tampa shrimp firm, contained 52 "tails" of *Trachypeneus similis*. The balance of the box consisted of the pink shrimp, *P. duorarum*. The count of the small *Trachypeneus* "tails" was approximately 110 to the pound. The count of *P. duorarum* was about 74 to the pound. Therefore, nearly one-fourth of the "tails" were *T. similis*. In February, a similar box produced from the same area contained, along with small *P. duorarum*, 26 "tails" of the smaller *T. similis*. The specimens of *T. similis*, being "pink" in color, could easily be mistaken by the fishery as the young of the pink shrimp, *P. duorarum*.

"Tail" sections of headed shrimp show anatomical structures that are useful in identifying the various penaeids. In *T. similis* there are mobile spines on the lateral margins of the telson; in *P. duorarum* the telson is smooth and spineless. The sixth pleonic somite of *T. similis* is pubescent and no sutures appear along the dorsal carina; in *P. duorarum*, this somite is glossy, and two channel-like grooves occur dorsally along the carina. The petasmata of the males, located between the first pair of pleopods, are easily differentiated in these two species (Burkenroad, 1934, Bull. Amer. Mus. Nat. Hist., 68(2): 61-143, and 1939, Bull. Bingham Oceanog. Col., 6(6):1-62).

Other studies, by our laboratory, on the occurrence and monthly abundance of the penaeids present in the Tortugas shrimp area, have shown *T. similis* to be the most common shrimp next to *P. duorarum*. *T. constrictus*, a smaller species, is also present but in lesser numbers. The percentage of the combined *Trachypeneus* specimens, collected during January through March, 1959, was almost equal to the percentage of *P. duorarum* collected at the same time.

Hildebrand (1954, Publ. Inst. Mar. Sci., Univ. Texas, 3(2):230-366), found that *T. similis* followed *P. aztecus* in abundance on the Texas shrimp grounds. He reports that this species is thought to be the young of the larger shrimp by the fishermen of this area. He further states that *T. similis*, being a small shrimp, undoubtedly escapes through the meshes of the large shrimp trawls. Although a few specimens were found mixed with the canning shrimp, *P. aztecus* and *P. setiferus*, at Grand Isle, Louisiana, he concludes that this species has little commercial importance.

According to Guest (1956, Texas Game and Fish Comm., Mar. Lab. Bull. No. 36, Ser. 5:1-23), two species of *Trachypeneus* appear in the bays

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and in the Gulf along Texas. He reports that these shrimp are usually too small to be of commercial value but do enter the bait fishery. During our shrimp studies in the Tampa Bay area, specimens of *T. constrictus* have been found with *P. duorarum* specimens in the tanks of the local bait dealers.

Various *Trachypeneus* species occurring in Indo-Pacific regions, Australia, Central and South American countries represent a large portion of the fisheries of these areas. Therefore, the value of this small shrimp from the Tortugas grounds should not be overlooked. Although the evidence presented here is based on a very small sample it suggests that *T. similis* is of more than minor importance. Accumulated data on the penaeids of Tortugas, being compiled for publication, should contribute a better knowledge of the shrimps from this area.—BONNIE ELDRED, Florida State Board of Conservation Marine Laboratory.

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CANINE TEETH IN FLORIDA WHITE-TAILED DEER

(*ODOCOILEUS VIRGINIANUS SEMINOLUS* GOLDMAN and KELLOGG)

Canine teeth in the upper jaw of North American deer are usually lacking although their occurrence has been reported by various authors. Nordquist (1941, Cal. Fish and Game, 27:39), observed canines in two male mule deer from California and Allen (1900, Amer. Mus. Nat. Hist., Bull. 12, pp. 191-262), in three white-tailed deer from Mexico. Van Gelder and Hoffmeister (1953, Journ. Wildl. Mgt., 17:100), report well developed upper canine teeth in a white-tailed deer specimen from Chiapas, Mexico. These latter authors examined 325 skulls in collections of the American Museum, Chicago Natural History Museum and the University of Illinois Museum of Natural History. Among these specimens the occurrence of upper canines was observed in 11 individuals, 3 of which were among those previously reported by Allen (*op. cit.*). Van Gelder and Hoffmeister (*op. cit.*) conclude that canine teeth are apparently more common in Central American specimens because 6 of 8 in their sample from known localities were from south of the 24th parallel. Kellogg (*in* Van Gelder and Hoffmeister, 1953) reports one or two instances of canines in 900 skulls of white-tailed deer he examined and additional observations of canines have been reported by Severinghaus (Editor's note in Van Gelder and Hoffmeister, 1953) for deer in New York. A cursory examination of 18,000 specimens in New York revealed the presence of canines in 23 individuals. Severinghaus indicates, however, that two-thirds of these deer were seen only in fresh condition at checking stations and suggests that some very small canines were probably overlooked.

In connection with recent studies of Florida white-tailed deer skulls from various localities definite examples of upper canine tooth development have been observed. A total of 95 skulls was examined and the presence of upper canine teeth was evident in 3 males, 2 adults and a yearling, from Volusia County in east central Florida, and a yearling female from Collier County in the extreme southwest part of the state. In the 2 adults the canines were well developed and the diastema from the anteriormost margin